

Claims

1. A recording apparatus that writes a video stream to a recording medium and edits the video stream, the  
5 recording apparatus comprising:

an editing unit operable to specify, in accordance with a user operation, a plurality of parts of the video stream as playback sections;

10 a display unit operable to display to the user, a plurality of parts that remain after the playback sections are subtracted from the video stream, as non-referenced parts; and

15 a deletion unit operable to delete at least one of the displayed non-referenced parts from the recording medium, according to a user operation.

2. The recording apparatus of Claim 1, wherein

each of the playback sections is represented by a set of starting/ending positions of a playback operation, and  
20 the plurality of non-referenced parts include a part from a front-end of the video stream to immediately before a starting position of one of the playback sections that appears first, and a part from immediately after an ending position of one of the playback sections that appears last  
25 to a rear-end of the video stream.

3. The recording apparatus of Claim 2, wherein  
the non-referenced parts include every part  
immediately after one of the playback sections to  
5 immediately before another of the playback sections that  
follows.

4. The recording apparatus of Claim 1, wherein  
the display performed by the display unit is one of:  
10 sequential playback of a plurality of pieces of picture  
data included in the non-referenced parts; and disposing,  
on a screen, of a plurality of thumbnails each corresponding  
to the pieces of picture data.

15 5. The recording apparatus of Claim 1, wherein  
a plurality of video streams are written to the  
recording medium, each stream being classified into two  
or more contents, and the deletion unit deletes only  
non-referenced parts included in a certain content.

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6. The recording apparatus of Claim 5, further  
comprising:

a list-display unit operable to display a list of the  
contents in the recording medium; and

25 a reception unit operable to receive, from the user,

specification of the certain content whose non-referenced parts are to be deleted, wherein

the non-referenced parts deleted by the deletion unit are included in the certain content whose specification  
5 has been received by the reception unit.

7. The recording apparatus of Claim 6, wherein  
a number of contents whose specification is to be received by the reception unit is two or more.

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8. The recording apparatus of Claim 1, further comprising:

a reception unit operable to receive, from the user, an operation for programming a recording; and

15 a calculation unit operable to calculate an area size required for the programmed recording, wherein

the display unit performs the display, only if the calculated area size exceeds a free area size of the recording medium, and the display unit further displays a message  
20 making an inquiry to the user about whether the non-referenced parts should be deleted.

9. The recording apparatus of Claim 1, further comprising:

25 a reception unit operable to receive, from the user,

specification of an environment setting value, the environment setting value being a minimum free area size that the recording medium should allocate, wherein

the display unit performs the display, only if the  
5 calculated area size exceeds a free area size of the recording medium, and the display unit further displays a message making an inquiry to the user about whether the non-referenced parts should be deleted.

10 10. The recording apparatus of Claim 1, further comprising:

a backup unit operable to record therein a backup of the non-referenced parts, prior to the deletion performed by the deletion unit;

15 an inquiry unit operable, after the deletion performed by the deletion unit, to make an inquiry to the user about whether an undo operation should be performed; and

a write back unit operable, if the user's answer to the inquiry is affirmative, to write back the backup recorded  
20 in the backup unit to the recording medium.

11. A computer-readable program that makes a computer write a video stream to a recording medium and edit the video stream, the program making a computer perform a  
25 procedure comprising:

an editing step of specifying, in accordance with a user operation, a plurality of parts of the video stream as playback sections;

5 a display step of displaying to the user, a plurality of parts that remain after the playback sections are subtracted from the video stream, as non-referenced parts; and

a deletion step of deleting at least one of the displayed non-referenced parts from the recording medium,  
10 according to a user operation.

12. The program of Claim 11, wherein

each of the playback sections is represented by a set of starting/ending positions of a playback operation, and  
15 the plurality of non-referenced parts include a part from a front-end of the video stream to immediately before a starting position of one of the playback sections that appears first, and a part from immediately after an ending position of one of the playback sections that appears last  
20 to a rear-end of the video stream.

13. The program of Claim 12, wherein

the non-referenced parts include every part immediately after one of the playback sections to  
25 immediately before another of the playback sections that

follows.

14. The program of Claim 11, wherein

the display performed at the display step is one of:

5 sequential playback of a plurality of pieces of picture data included in the non-referenced parts; and disposing, on a screen, of a plurality of thumbnails each corresponding to the pieces of picture data.

10 15. The program of Claim 11, wherein

a plurality of video streams are written to the recording medium, each stream being classified into two or more contents, and at the deletion step, only non-referenced parts included in a certain content are  
15 deleted.

16. The program of Claim 15, wherein the procedure further comprises:

a list-display step of displaying a list of the  
20 contents in the recording medium; and

a reception step of receiving, from the user, specification of the certain content whose non-referenced parts are to be deleted, where

the non-referenced parts deleted at the deletion step  
25 are included in the certain content whose specification

has been received at the reception step.

17. The program of Claim 16, wherein  
a number of contents whose specification is to be  
5 received at the reception step is two or more.

18. The program of Claim 11, wherein the procedure  
further comprises:

a reception step of receiving, from the user, an  
10 operation for programming a recording; and

a calculation step of calculating an area size required  
for the programmed recording, where

at the display step, the display is performed only  
if the calculated area size exceeds a free area size of  
15 the recording medium, and at the display step, a message  
making an inquiry to the user about whether the  
non-referenced parts should be deleted is further  
displayed.

20 19. The program of Claim 11, wherein the procedure  
further comprises:

a reception step of receiving, from the user,  
specification of an environment setting value, the  
environment setting value being a minimum free area size  
25 that the recording medium should allocate, where

at the display step, the display is performed only if the calculated area size exceeds a free area size of the recording medium, and at the display step, a message making an inquiry to the user about whether the non-referenced parts should be deleted is further displayed.

20. The program of Claim 11, wherein the procedure further comprises:

10 a backup step of recording therein a backup of the non-referenced parts, prior to the deletion performed at the deletion step;

an inquiry step of, after the deletion performed at the deletion step, making an inquiry to the user about whether  
15 an undo operation should be performed; and

a writeback step of, if the user's answer to the inquiry is affirmative, writing back the backup recorded in the backup unit to the recording medium.

20 21. A system LSI that performs control with respect to a drive device for a recording medium, the recording medium storing therein at least one video stream, the system LSI comprising:

an editing unit operable to specify, in accordance  
25 with a user operation, a plurality of parts of the video



stream as playback sections;

a display unit operable to display to the user, a plurality of parts that remain after the playback sections are subtracted from the video stream, as non-referenced parts; and

a deletion unit operable to delete at least one of the displayed non-referenced parts from the recording medium, according to a user operation.

10 22. The system LSI of Claim 21, wherein

each of the playback sections is represented by a set of starting/ending positions of a playback operation, and the plurality of non-referenced parts include a part from a front-end of the video stream to immediately before a starting position of one of the playback sections that appears first, and a part from immediately after an ending position of one of the playback sections that appears last to a rear-end of the video stream.

20 23. The system LSI of Claim 22, wherein

the non-referenced parts include every part immediately after one of the playback sections to immediately before another of the playback sections that follows.

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24. The system LSI of Claim 21, wherein

the display performed by the display unit is one of:  
sequential playback of a plurality of pieces of picture  
data included in the non-referenced parts; and disposing,  
5 on a screen, of a plurality of thumbnails each corresponding  
to the pieces of picture data.

25. The system LSI of Claim 21, wherein

a plurality of video streams are written to the  
10 recording medium, each stream being classified into two  
or more contents, and the deletion unit deletes only  
non-referenced parts included in a certain content.

26. The system LSI of Claim 25, further comprising:

15 a list-display unit operable to display a list of the  
contents in the recording medium; and

a reception unit operable to receive, from the user,  
specification of the certain content whose non-referenced  
parts are to be deleted, wherein

20 the non-referenced parts deleted by the deletion unit  
are included in the certain content whose specification  
has been received by the reception unit.

27. The system LSI of Claim 26,

25 a number of contents whose specification is to be

received by the reception unit is two or more.

28. The system LSI of Claim 21, further comprising:

a reception unit operable to receive, from the user,

5 an operation for programming a recording; and

a calculation unit operable to calculate an area size required for the programmed recording, wherein

the display unit performs the display, only if the  
calculated area size exceeds a free area size of the recording  
10 medium, and the display unit further displays a message  
making an inquiry to the user about whether the  
non-referenced parts should be deleted.

29. The system LSI of Claim 21, further comprising:

15 a reception unit operable to receive, from the user,  
specification of an environment setting value, the  
environment setting value being a minimum free area size  
that the recording medium should allocate, wherein

the display unit performs the display, only if the  
20 calculated area size exceeds a free area size of the recording  
medium, and the display unit further displays a message  
making an inquiry to the user about whether the  
non-referenced parts should be deleted.

25 30. The system LSI of Claim 21, further comprising:

a backup unit operable to record therein a backup of the non-referenced parts, prior to the deletion performed by the deletion unit;

an inquiry unit operable, after the deletion performed  
5 by the deletion unit, to make an inquiry to the user about whether an undo operation should be performed; and

a write back unit operable, if the user's answer to the inquiry is affirmative, to write back the backup recorded in the backup unit to the recording medium.